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(71) Applicant (for all designated States except US): KONINKLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

(71) Applicant (for DE, FR, GB, JP only): INTERUNIVERSITAIR MICROELEKTRONICA CENTRUM VZW [BE/BE]; Kapeldreef 75, B-3001 Leuven (BE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): MEUNIER-BEILARD, Philippe [FR/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). CAYMAX, Mathieu R., J. [BE/BE]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

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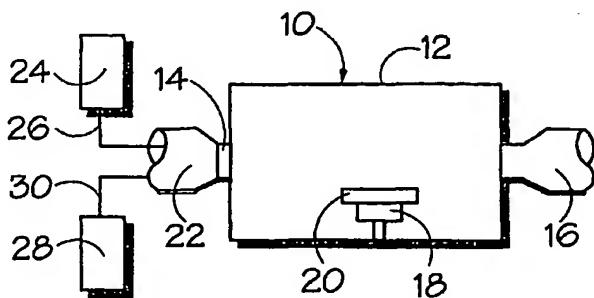
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(54) Title: METHOD AND APPARATUS FOR FORMING EPITAXIAL LAYERS



(57) Abstract: The present invention provides a method of depositing epitaxial layers based on Group IV elements on a silicon substrate by Chemical Vapor Deposition, wherein nitrogen or one of the noble gases is used as a carrier gas, and the invention further provides a Chemical Vapor Deposition apparatus (10) comprising a chamber (12) having a gas input port (14) and a gas output port (16), and means (18) for mounting a silicon substrate within the chamber (12), said apparatus further including a gas source connected to the input port and arranged to provide nitrogen or a noble gas as a carrier gas.

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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 C30B H01L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 01/14619 A (JUERGENSEN HOLGER ; AIXTRON AG (DE); STRAUCH GERT (DE); KAEPPLEL JOHA) 1 March 2001 (2001-03-01) cited in the application abstract; claims 8,15	1-7,9,10
X	KLUMPP A ET AL: "AMORPHOUS SILICON CARBIDE AND ITS APPLICATION IN SILICON MICROMACHINING" SENSORS AND ACTUATORS A, ELSEVIER SEQUOIA S.A., LAUSANNE, CH, vol. A41, no. 1/3, 1 April 1994 (1994-04-01), pages 310-316, XP000450047 ISSN: 0924-4247 Introduction, Experimental	1-10

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Date of the actual completion of the International search	Date of mailing of the International search report
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Category	Relevant to claim No.
X	VON MUNCH W ET AL: "New susceptor arrangement for the epitaxial growth of beta-SiC on silicon" JOURNAL OF CRYSTAL GROWTH, NORTH-HOLLAND PUBLISHING CO. AMSTERDAM, NL, vol. 158, no. 4, 1 February 1996 (1996-02-01), pages 491-496, XP004002791 ISSN: 0022-0248 2. Reactor design and growth procedures; figure 1; table 1 -----	1-7, 9, 10
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X	KOBAYASHI S ET AL: "Initial growth characteristics of germanium on silicon in LPCVD using germane gas" JOURNAL OF CRYSTAL GROWTH, NORTH-HOLLAND PUBLISHING CO. AMSTERDAM, NL, vol. 174, no. 1-4, 1 April 1997 (1997-04-01), pages 686-690, XP004113800 ISSN: 0022-0248 1. Introduction; 2. Experimental procedure -----	1, 2, 4-10

INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date		Patent family member(s)	Publication date
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		WO	0114619 A1	01-03-2001
		EP	1218573 A1	03-07-2002
		JP	2003507319 T	25-02-2003